In the Supreme Court of the United States

OCTOBER TERM, A. D. 1947.

No. 280.

FUNK BROTHERS SEED COMPANY,
Petitioner,

vs.

KALO INOCULANT COMPANY,
Respondent.

REPLY BRIEF FOR PETITIONER.

H. A. TOULMIN, JR.,
Attorney for Petitioner.

H. A. TOULMIN, JR.,
D. C. STALEY,
Of Counsel.

THE GATES LEGAL PUBLISHING CO., CLEVELAND, OHIO—MAIN 8647

INDEX.

I. There Are No Concurrent Findings of the Courts Below 1

II. Petitioner Has Made No Confession of No Anticipation 2

III. Mixed Inoculants Are Old 2

IV. Bond Had No New Composition of Matter and Attempts to Incorporate Limitations By Inference 3

V. Bond's Claims Are Not Limited to Critical Factors Set Forth In Respondent's Brief 5

VI. Respondent Admits Mixed Inoculants Are Old.. 6

VII. Mere Discovery of Law of Nature Is Not Invention 7

VIII. Bond's Inoculant Is Not A True Composition of Matter 9

IX. Petitioner Need Not Rely On Invalidity By Reason of Anticipation for Bond Has No Invention 11

X. Novelty and Utility are Insufficient to Support Invention 12

XI. Discovery of a New Use of a Law of Nature, Without More, Is Not Invention 14

XII. Commercial Success Alone Does Not Support Invention 15

XIII. Functional Language in the Claims Is Improper When Other Language Is Available 16

XIV. Respondent's Statement of Petitioner's Position Is Incorrect 17

XV. Specific Answers to Respondent's Brief 17

XVI. Public Importance 21

TABLE OF AUTHORITIES.

Cases.

Cameron Septic Tank Co. v. Village of Saratoga Springs (C. C. A. 2), 159 Fed. 453, c. d. 209 U. S. 548, 28 S. Ct. 759, 52 L. Ed. 921 18

Collar Co. v. Van Dusen, 23 Wall. (90 U. S.) 530, 23 L. Ed. 128 ..... 2, 3

Cuno Engineering Corporation v. Automatic Devices Corporation, 314 U. S. 84, 62 S. Ct. 37, 86 L. Ed. 58 ..... 8, 13

Dow Chemical Co. v. Halliburton Oil Well Cementing Co., (C. C. A. 6, 1943), 139 F. (2d) 473, affirmed (1945) 324 U. S. 320, 65 S. Ct. 647, 89 L. Ed. 973... 15

Dunbar v. Meyers, 94 U. S. 187, 24 L. Ed. 34 3

Ewald, In re (C. C. P. A., 1941), 117 F. (2d) 755..... 16

Foley, Admx. of Gathmann v. United States, 260 U. S. 667, 43 S. Ct. 240, 67 L. Ed. 451 22

General Electric Co. v. DeForest Radio (C. C. A. 3), 28 F. (2d) 641, c. d. 278 U. S. 656, 49 S. Ct. 180, 73 L. Ed. 565 19

General Electric Co. v. Wabash Appliance Corp. et al., 304 U. S. 364, 58 S. Ct. 899, 82 L. Ed. 1402 16

Gerald M. Friend, Inc. v. Walsh et al. (C. C. A. 2, 1944), 141 F. (2d) 180 15

Halliburton Oil Well Cementing Co. v. Walker et al., 329 U. S. 1, 67 S. Ct. 691, 91 L. Ed. 15 ..... 7, 14, 16

Hegan, In re (C. C. P. A., 1938), 97 F. (2d) 86..... 16

Hotchkiss v. Greenwood, 11 How. (52 U. S.) 248, 13 L. Ed. 683 7

Kissock v. Duquesne Steel Foundry Co. et al. (C. C. A. 3, 1929), 37 F. (2d) 249, c. d. 281 U. S. 749, 50 S. Ct. 354, 74 L. Ed. 1161 15

LeRoy et al. v. Tatham, et al., 14 How. (55 U. S.) 156, 14 L. Ed. 367 ..... 7, 13, 17, 18

Libby-Owens-Ford Glass Co. v. Celanese Corporation, 135 F. (2d) 138 10

Mackay Radio & Telegraph Co. v. Radio Corporation of America, 306 U. S. 86, 59 S. Ct. 427, 83 L. Ed. 506 ..... 8, 13, 19

Metals Recovery Co. v. Anaconda Copper Mining Co., 31 F. (2d) 100 10

Old Town Ribbon & Carbon Co. v. Columbia Ribbon & Carbon Mfg. Co., 159 F. (2d) 379 7

Pickering v. McCullough, 104 U. S. 310, 26 L. Ed. 749 .. 11

Roemer v. Simon, 95 U. S. 214, 24 L. Ed. 384 3

Sewall v. Jones, 91 U. S. 171, 23 L. Ed. 275 18

Smith v. Hall, 301 U. S. 216, 232, 57 S. Ct. 711, 81 L. Ed. 1049 ..... 5, 6, 21

Telephone Cases, 126 U. S. 1, 8 S. Ct. 778, 31 L. Ed. 863 15

Univis Corporation et al. v. Rips et al. (C. C. A. 6, 1939), 104 F. (2d) 749, c. d. 308 U. S. 592, 60 S. Ct. 121, 84 L. Ed. 495 15

White v. Dunbar, 119 U. S. 47, 7 S. Ct. 72, 30 L. Ed. 303 16

Williams Mfg. Co. v. United Shoe Mach. Corp., 316 U. S. 364, 63 S. Ct. 1179, 86 L. Ed. 1537 1

Wintermute v. Redington (C. C. Ohio, 1856), Fed. Case 17, 896, 1 Fish Pat. Cas. 239, 30 Fed. Cas. 367 18

Texts.

Deller, "Principles of Patent Law For The Chemical Metallurgical Industries," page 200 10

Walker, Deller's Edition, Volume 1, page 55 10

In the Supreme Court of the United States

OCTOBER TERM, A. D. 1947.

No. 280.

FUNK BROTHERS SEED COMPANY,
Petitioner,

vs.

KALO INOCULANT COMPANY,
Respondent.

REPLY BRIEF FOR PETITIONER.

I. THERE ARE NO CONCURRENT FINDINGS OF THE COURTS BELOW.

The Respondent at the outset of its brief on page 4 and again on page 32 would lead this Court into believing that Petitioner's position has been twice rejected by the Courts below and thus gain to itself the benefit of the effect of concurring opinions under cases decided by this Court such as *Williams Mfg. Co. v. United Shoe Mach. Corp.*, 316 U. S. 364, 63 S. Ct. 1179, 86 L. Ed. 1537.

It is apparent there are no "concurrent" findings of the Courts below which would invoke the rule of the *Williams* case. The District Court was clear in its finding that the claims in suit "do not involve the *invention* or *discovery* of 'any *new* and *useful* art, machine, manufacture or composition of matter'." To declare there were "concurrent" findings on "(1) novelty," "(2) utility" and "(3) the quality of inventiveness" in the light of the findings of the District Court is not in accord with the facts. It is on the result of these findings and the application of the law to them that the Court of Appeals differed with the District Court.

II. PETITIONER HAS MADE NO CONFESSION OF NO ANTICIPATION.

Petitioner has made no confession that there is no anticipation by prior art. We state clearly in footnote 4, page 4 of our brief that Bond's ideas are old, but it is immaterial here as "there is no invention." Petitioner's position is set forth on page 15 of its brief, which we quote again:

> *"It makes no difference whether Bond discovered inhibition or not. It makes no difference if it was new. It is still a law of nature, used without modification or creation of an art, machine, manufacture or composition of matter. It is, therefore, not invention."*

III. MIXED INOCULANTS ARE OLD.

Mixed inoculants are old. Otherwise, Bond would not have been confronted with his alleged problem that sometimes the bacteria inhibit one another. The Bond patent states that mixed cultures were old. (Page 4, left column, lines 63 to 71, R. 776.) All that Bond claims to have discovered in his patent is the characteristic of non-inhibition in some strains of bacteria. But he does no more than use these kinds of bacteria in the mixed inoculant that was known prior to his patent.

The error of the Circuit Court of Appeals and of the Respondent is in the assumption that because of the discovery of this natural characteristic of non-inhibition, the inoculant that contained the bacteria having this characteristic was new; and because it was new, it was patentable. But Bond fails to point out any novelty in the product using the non-inhibitive bacteria that is different from anything occasioned by this bacteria when present in any other mixed inoculant, whether his or of the prior art.

Petitioner has already pointed out in its brief on page 30 that "articles of manufacture may be new in a commercial sense when they are not new in the sense of the patent law." *Collar Co. v. Van Dusen*, 23 Wall. (90 U. S.)

530, 563, 23 L. Ed. 128. A product may be new commercially but if it fails to comply with the prerequisite of either "newness" or "invention" as required by the statute (R. S. 4886) the product is not patentable. As we have already pointed out in our brief, page 31, this Court has said, in *Collar Co. v. Van Dusen, supra*:

> "Nothing short of invention or discovery will support a patent for a manufacture any more than for an art, machine, or composition of matter, for which proposition there is abundant authority in the decisions of this Court.†"

"† *Hotchkiss v. Greenwood*, 11 How. 265, *Phillips v. Page*, 24 How. 167; *Jones v. Morehead*, 1 Wall. 162; *Stimpson v. Woodman*, 10 Wall. 121."

See also:

Dunbar v. Meyers, 94 U. S. 187, 196, 197, 24 L. Ed. 34; *Roemer v. Simon*, 95 U. S. 214, 217, 218, 24 L. Ed. 384.

IV. BOND HAD NO NEW COMPOSITION OF MATTER AND ATTEMPTS TO INCORPORATE LIMITATIONS BY INFERENCE.

The Respondent claims that the Bond product is a new composition of matter, with a large number of bacteria.

The alleged newness of the product is founded on the holding of the Circuit Court, and to sustain its position of novelty the Respondent would lead this Court to believe that Mr. Bond overcame an "insurmountable" difficulty and solved "a problem of thirty years' standing" that had retarded the development of mixed inoculants when he discovered that in nature there existed both inhibitive and non-inhibitive strains of legume bacteria.

There is not a shred of evidence in the Record which proves that any mixed inoculant known prior to Bond failed because of the inhibitive effect of one species of bacteria on another. He alleges this, but there was no proof offered that this was the reason why any of the prior mixed inoculants had passed from the commercial

market. The fact is there was no real commercial demand by the farmers for such a product.[1]

The Respondent bases its position of alleged failure of mixed inoculants before the time of Bond largely on the report of Max Kronenberger[2] which was directly refuted by Petitioner's expert, Dr. Hofer, as stated in Petitioner's Brief, page 14.

The Respondent's effort to show that he has a new composition enlarges the claims of the patent to include in them by inference "large numbers of each species of bacteria." He attempts now to deny his own claims and limit them by inference with inclusion of elements that are not there, in an effort to show a "new composition."

At least on pages 13, 14, 15 and 57 of Respondent's Brief, he attempts to bring out this new factor for the purpose of reading it into his claims to make out a new composition of matter. Not a single claim of the patent makes any mention of "large numbers" of bacteria. "Numbers

---

[1] R. 190, 191, 195, 196.

[2] The Respondent, on pages 10 and 11 of its brief, would lead this Court to believe that extensive scientific investigations had been made by those skilled in this art to determine the "causes of the failure of mixed cultures to provide the same degree of nitrogen fixation as single cultures prior to the Bond invention."

Such is not the fact, as admitted by Plaintiff's witness, Robert H. Burris, who stated that "Nobody was particularly interested in it." (R. 349.) At least, the scientific world was not interested in the alleged problem so readily put forward by the Respondent as that which presented itself to Bond at the time of his invention.

The Respondent could find no article by any scientist of real repute to support its position and was forced to rely upon one by Max Kronenberger of the Bavarian Cultural Institute for Plant Culture and Plant Protection, Munich, Germany (PX-11, R. 383, 394), as the basis for its statement of the problem that allegedly existed. This article is clearly refuted by the scientific investigations made by Petitioner's expert witnesses in the reports of their investigations (DX-5, R. 446; DX-7, R. 471; DX-13, R. 482 to 487; DX-29, R. 670, 671), which show that the normal expected condition, when the legume bacteria are mixed together, is that a beneficial result will be obtained by the mixture rather than a detrimental effect, as alleged by Bond. Significantly, Kronenberger alleges

(Continued on following page)

of substantially the same order of magnitude" or equal numbers are not "large numbers" which the Respondent now interprets into its claims in an effort to strengthen them. Where one seeks and obtains broad claims, he cannot later narrow them merely by inference and inclusion of factors that are not actually in the claims. This is contrary to the law as set forth in *Smith v. Hall*, 301 U. S. 216, 232, 57 S. Ct. 711, 81 L. Ed. 1049:

> "The Petitioner [the Respondent here] having sought and obtained a broad construction of his claim, cannot now narrow it so as to avoid anticipation by showing that the claimed method [product here] was used in a particular form of structure not claimed." (Editorial notes ours.)

V. BOND'S CLAIMS ARE NOT LIMITED TO CRITICAL FACTORS SET FORTH IN RESPONDENT'S BRIEF.

In addition to the large numbers of each species of bacteria which the Respondent now claims to be a critical element of the product, he alleges that it is also critical that the "large numbers" be "in a powder base of low

---

(*Continued from preceding page*)

every mixed culture is detrimental; Petitioner's expert, Dr. Hofer, following the procedure of the Kronenberger article, found exactly the opposite effect, namely, a beneficial result. Dr. Hofer's test results were not challenged by Respondent and thus stand undisputed on the record.

Respondent's brief, on page 11, would infer that Petitioner's expert, Dr. Lewis Erdman, demonstrated the impracticability of mixed cultures. Dr. Erdman's statement quoted by Respondent could apply only when a plurality of different bacteria are actually *grown* together. This statement does not apply when bacteria are grown separately and then mixed together. Dr. Erdman clearly stated that he could very easily produce the Bond mixed culture merely by mixing bacteria together. (R. 145.)

> "We could grow a pure culture liquid suspension of a selected number of strains of alfalfa group bacteria in one tank. In another tank we could grow the red clover group of bacteria, and in a third tank our selected strains of soybean bacteria. We could mix these suspensions separately with the humus and then mix equal portions of the alfalfa, clover and soybean Nitragin. This would be the equivalent of Uni-Culture." (The Bond product.)

nutrient" "which eliminates the danger of one species of bacteria overgrowing the others." (Br. 15.) This claim of the use of a low nutrient value in the base to control growth of the bacteria is not an element of any of the claims except the faintest suggestion in claims 8 and 13. Any effort of the Respondent now to include by inference such a factor in the claims to show a new composition of matter is contrary to the law. *Smith v. Hall*, 301 U. S. 216, 57 S. Ct. 711, 81 L. Ed. 1049.

Further, there is absolutely no mention in any of the claims of the Bond patent that the bacteria must be arranged in numbers in the base so that they will not outgrow one another, which he now says is so important. (Br. 15.) The Respondent completely overlooks the fact that these factors were known in the art long before the Bond patent.[1]

VI. RESPONDENT ADMITS MIXED INOCULANTS ARE OLD.

Respondent admits that mixed inoculants were sold prior to the Bond patent (Br. 20), but it seeks to avoid the effect of these prior products by waving them aside as of "negligible importance" and that there is a "signal difference in kind" between mixed inoculants for "field seeds" and mixed inoculants for "garden seeds." (Br. 34.) However, there is not a single statement in the Record to prove the truth of these assertions. The fact is, there is no difference in the natural functioning of mixed inoculants for use on field or garden seeds.[2]

The trouble with the Respondent's position is that the claims of the patent, like claims 4 and 5[3] cover only a mixed inoculant in which there are strains of bacteria that have the non-inhibitive characteristics. This leaves the claims with the alleged discovery of the natural characteristics of

---

[1] R. 161, 166, 169.

[2] R. 297.

[3] R. 779.

the bacteria as the only thread of possible distinction over anything that preceded Bond. But the discovery is not patentable. *LeRoy et al. v. Tatham, et al.*, 14 How. (55 U. S.) 156, 14 L. Ed. 367.

The difficulty with Respondent's position here, is that a mixed inoculant was no invention of Bond, neither are the natural characteristics of the bacteria an invention of Bond. These characteristics were present or absent in any mixed inoculant before Bond as the inhibitive or non-inhibitive kinds of bacteria were present or absent from the inoculant.

This leaves the Respondent in the position of endeavoring to read into the claims, which are product claims, a functional statement as a matter of definition at the exact point of novelty, which is contrary to law. *Halliburton Oil Well Cementing Co. v. Walker et al.*, 329 U. S. 1, 67 S. Ct. 691, 91 L. Ed. 15. The whole basis of the Respondent's position is to read into the claims what is *not* there in order to present some basis of alleging that the Bond product is a novel composition of matter—this, because Bond realizes that this is the critical point of the case, upon which he has failed to sustain the burden of proof.

VII. MERE DISCOVERY OF LAW OF NATURE IS NOT INVENTION.

Assuming that all that Respondent says is true, which we controvert, there is still no invention in the Bond product because a mere discovery of the natural, non-inhibitive characteristic of the bacteria and a selection of them is not invention. Neither a discovery nor a selection is patentable. *LeRoy et al. v. Tatham et al.*, 14 How. (55 U. S.) 156, 14 L. Ed. 367; *Hotchkiss v. Greenwood*, 11 How. (52 U. S.) 248, 13 L. Ed. 683; *Old Town Ribbon & Carbon Co. v. Columbia Ribbon & Carbon Mfg. Co.*, 159 F. (2d) 379.

To make an invention, the discoverer of a law of nature must apply the law in such a way as to produce a

man-made creation, that is, something that did not exist before. In this respect, we ask—what did Bond create that was not in existence before him? The answer is—nothing. Mixed inoculants were known before Bond; he uses the same bacteria that has always existed in nature; he uses the same base or carrier; all of the tests that he applies for efficiency were old and well-known before Bond. All of this he admits, as we have pointed out in our brief, pages 12 and 13.

Invention involves the use of the law of nature to create a novel structure, as this Court has held in *Mackay Radio & Telegraph Co v. Radio Corporation of America*, 306 U. S. 86, 94, 59 S. Ct. 427, 83 L. Ed. 506.

> "* * * a novel and useful structure created with the aid of knowledge of scientific truth may be [patentable]." (Editorial note ours.)

Every case is uniform in this requirement, that a man-made invention is necessary to apply the law of nature before a patent can legitimately issue.

Therefore, the statement of the Circuit Court of Appeals for the Seventh Circuit that "the discovery of a natural phenomenon, or of a quality or attribute of a well-known article and application of that quality in a successful combination which is of value to mankind is entitled to patent protection," is in error.

It takes more than a discovery and an application of the discovery into a successful combination to entitle one to patent protection. There must be the attribute of "invention" and there must be the attribute of "newness." The mere fact that a combination is successful upon the application of a discovery of a natural phenomenon to it is insufficient to entitle one to patent protection under the law, as this Court has stated in *Cuno Engineering Corporation v Automatic Devices Corporation*, 314 U. S. 84, 90, 62 S. Ct. 37, 86 L. Ed. 58.

"* * * Under the statute (35 U. S. C. § 31; R. S. § 4886) the device must not only be 'new and useful' it must also be an 'invention' or 'discovery.' *Thompson v. Boisselier*, 114 U. S. 1, 11. * * *"

The mere fact that Bond was the first to combine successfully in a "commercial product" bacteria so that they do not cooperate and do not affect one another, is not invention, because mere "novelty" or mere "utility" alone will not sustain invention. Bond admits this in Respondent's brief when he says that it is necessary to have in addition to novelty and utility, "the quality of inventiveness." (Br. 43.) Bond admits, therefore, that something must be created by the inventor. But, we ask here, what did Bond create? The answer is—nothing, for the mixed inoculant was known before Bond and the bacteria have been in existence since time immemorial.

VIII. BOND'S INOCULANT IS NOT A TRUE COMPOSITION OF MATTER.

A composition of matter must be more than a collection of bacteria which do not affect one another. A composition of matter, under the statute, pre-supposes an invention. The Bond inoculant is no more than a collection of natural bacterial life *per se*, into a common base. It fails of the test of invention for the reason that natural bacterial life *per se* had been collected together in a common base before Bond. His only contribution, if we deem it such for purpose of argument, is the finding that in the collection of bacterial life *per se* in previous mixed inoculants, some of the bacterial life was inhibitive and other was non-inhibitive. Bond merely took out of the prior mixed inoculants that kind of bacterial life that was inhibitive and left in that bacterial life that was non-inhibitive. Even Bond himself admits that the prior mixed inoculants could contain both inhibitive and non-inhibitive bacteria. (See footnote 18, page 9, Petitioner's Brief.)

"A patent monopoly is not to be extended to the use of a class of materials, some of the members of which are shown not to be effective in carrying out the inventive process." *Libby-Owens-Ford Glass Co. v. Celanese Corporation*, 135 F. (2d) 138, 145. So here, where the Bond patent claims are not limited to the use "only" of non-inhibited strains of bacteria,[1] the patent monopoly should not be given to Bond.

Also, where there is only a mere association of non-cooperating elements, there is no invention. In the case of *Metals Recovery Co. v. Anaconda Copper Mining Co.*, 31 F. (2d) 100, the question before the Court was concerning a material in which there were both "frothing" oils and "collecting" oils, neither of which had any particular co-operation with the other. The specific question was whether it was invention to bring together "two substances each of which performs but one of the two requisite functions." The Court said that "such a conception we hold was familiar to the art."

So here is the conception of association of two bacteria either of which performs but one of the two requisite functions desired of the mixed inoculant; there is no "new" composition of matter, for the bacteria had previously been associated in prior mixed inoculants. As stated by *Walker*, Deller's Edition, Volume 1, page 55, "To be a proper subject of a patent, a composition of matter must, like a process, a machine, or a manufacture, meet all the requirements of invention, novelty, and utility." This the Bond product fails to do.

In "Principles of Patent Law For The Chemical Metallurgical Industries" by Anthony William Deller, page 200, he classifies a composition of matter as follows, quoting from Robinson in his classical work on patents:

"A composition of matter is an instrument formed by the intermixture of ingredients possessing proper-

---

[1] See Claim 5 of Bond patent. (R. 779.)

ties which belong to none of these ingredients in their separate state.''

This is in further support of the Petitioner's position, pages 27 and 28 of its brief. In the case of *Pickering v. McCullough,* 104 U. S. 310, 317-318, 26 L. Ed. 749, the Court said:

> ''We are clearly of opinion that this is not patentable. It comes plainly within the rule, as stated by Mr. Justice Strong, in *Hailes v. Van Wormer* (20 Wall. 353, 368), where he said: 'All the devices of which the alleged combination is made are confessedly old. No claim is made for any one of them singly, as an independent invention. It must be conceded that a new combination, if it produces new and useful results, is patentable, though all the constituents of the combination were well known and in common use before the combination was made. But the results must be a product of the combination, and not a mere aggregate of several results, each the complete product of one of the combined elements. Combined results are not necessarily a novel result, nor are they an old result obtained in a new and improved manner. Merely bringing old devices into juxtaposition, and there allowing each to work out its own effect, without the production of something novel, is not invention.' ''

IX. PETITIONER NEED NOT RELY ON INVALIDITY BY REASON OF ANTICIPATION FOR BOND HAS NO INVENTION.

Petitioner does not rely upon invalidity by reason of anticipation because you must have an invention under the law before you need the defense of anticipation. This does not mean that we think that whatever Bond did is not old, because it is, and his own admissions in his testimony indicate that to be a fact. Respondent's patent does not meet the test of invention.

Therefore, Petitioner does not need to raise the issue here, that is, of invalidity by reason of anticipation, be-

cause it makes no difference whether the thing is new or old. We conclude, therefore, that whether Bond had a new or old idea, or whether Bond was the first to discover non-inhibition, or whether Bond was the first to use non-inhibitive bacteria, or was the first to use a low nutrient, or was the first to use large numbers of bacteria—all these things make no difference: there is still no invention, for everything rests upon the one factor of the discovery of the natural characteristics of bacteria, which characteristics have been in existence in the bacteria from time immemorial.

Even assuming everything that Bond claims in Respondent's brief is true, he has still created no "new" composition of matter, which is the foundation upon which any invention must be predicated.

On this issue, the District Court disagreed with Bond and found that he had not made any "invention" or "discovery" of any "new" and "useful" art, machine, manufacture, or composition of matter.

The Circuit Court of Appeals for the Seventh Circuit did not disagree in effect, with the District Court as to the facts of the case, but only with the result as determined by the application of the law to the facts. The Circuit Court of Appeals merely held that Bond had a composition of matter and because he had a composition of matter, it was an invention.

X. NOVELTY AND UTILITY ARE INSUFFICIENT TO SUPPORT INVENTION.

Let us now take Respondent's position that Bond discovered the existence of non-inhibitive bacteria, and assume he is correct in his claim of novelty and utility, all of which is denied—yet he still does not have invention for the following reasons:

A. Novelty and utility alone are insufficient to constitute patentability. Respondent says this in his brief

(Br. 43). Thus, all argument urged by the Respondent as to novelty and utility falls by the wayside, unless the quality of inventiveness is also present.

B. Bond does not have "the quality of inventiveness" in a "new" composition of matter because in applying the law of nature to his product he has done nothing to change the old combination of a mixed culture, except to use non-inhibitive bacteria. Respondent does not pretend that Bond invented either mixed inoculants or the bacteria. He does not have a "new" composition because "the composition" of a mixed inoculant was old before Bond. Since he did not invent the bacteria, he can have no invention.

Therefore, his discovery of non-inhibitive bacteria has not been used by him to produce a "novel and useful structure created with the aid of knowledge of scientific truth" as required in *Mackay Radio & Telegraph Co. v. Radio Corporation of America*, 306 U. S. 86, 94, 59 S. Ct. 427, 83 L. Ed. 506. As stated in *LeRoy, et al. v. Tatham, et al.*, 14 How. (55 U. S.) 156, 14 L. Ed. 367; an invention arises under the law of nature only if the principle is applied to a special purpose "to effectuate a practical result and benefit not previously attained"; and further "invention is not in discovering them [laws of nature] but in applying them to useful objects." Useful objects under the law must be an "invention" or a "discovery" and must be "new" and "useful" as held by this Court in *Cuno Engineering Corporation v. Automatic Devices Corp.*, 314 U. S. 84, 90, 62 S. Ct. 37, 86 L. Ed. 58.

The Respondent's statement of the invention of the Bond patent on pages 12 and 13 of its brief does not meet the required test. It will be noted that this statement departs from the claims of the patent in that the Respondent includes in the statement of invention factors that are not a part of the claims of the patent. These factors are that

the product shall contain (1) "a base material substantially free of nutrients" and (2) "large numbers of each species of bacteria." The latter of these factors is nowhere contained in any of the claims and the low nutrient value of the base is only hinted at in claims 8 and 13. *Hence, if these factors are essential to Respondent's position of novelty, newness and invention, the claims fail of patentability.*

C. The Respondent injects into these product claims statements of function at the exact point of novelty, which statements of function concern only the process by which the product is obtained. The statement of function as to the inhibition of the bacteria with respect to one another is not descriptive of the product but is descriptive only of the bacteria. Hence, it is no limitation of the product *per se*, and without this limitation the product *per se* becomes the product of the prior art. Thus, the functional language of the claims falls within the condemnation of this Court in *Halliburton Oil Well Cementing Co. v. Walker, et al.*, 329 U. S. 1, 67 S. Ct. 6, 91 L. Ed. 15.

XI. DISCOVERY OF A NEW USE OF A LAW OF NATURE, WITHOUT MORE, IS NOT INVENTION.

A discovery of a new use for a law of nature, without more, is not patentable invention. The "discovery," as a discovery of natural functions, might be new but the result performed by the natural functions of the elements, in this case the bacteria, is not new. Hence, a discovery of a new law of nature and its application to a corporal element can rise to the dignity of invention only if the statutory requisites of novelty, utility and inventiveness are met with some "new" mechanical combination or method to utilize that discovery or that law of nature in a way that it had not been used before.

As the Respondent has stated, "Man is incapable of changing or modifying the immutable laws of nature," but

merely using these immutable laws of nature without more, does not rise to the dignity of invention. The discoverer must at least control the laws of nature so that he can make it do his bidding, to produce a new and useful result. *Telephone Cases*, 126 U. S. 1, 8 S. Ct. 778, 31 L. Ed. 863. But here, Bond does not control the law of nature that he has discovered. He uses it in exactly the same way that it has always performed in nature without any control, and hopes that he will obtain the result that he desires.

XII. COMMERCIAL SUCCESS ALONE DOES NOT SUPPORT INVENTION.

Invention does not lie in any device or product merely for the reason that it is a tremendous commercial success. While commercial success may tip the scales in favor of an invention when patentability is in doubt, yet commercial success alone, regardless of how great, will never take the place of the statutory requisites of invention. *Dow Chemical Co. v. Halliburton Oil Well Cementing Co.*, (C. C. A. 6, 1943), 139 F. (2d) 473, affirmed (1945) 324 U. S. 320, 330, 65 S. Ct. 647, 89 L. Ed. 973; *Kissock v. Duquesne Steel Foundry Co. et al.* (C. C. A. 3, 1929), 37 F. (2d) 249, 251, c. d. 281 U. S. 749, 50 S. Ct. 354, 74 L. Ed. 1161; *Univis Corporation et al. v. Rips et al.* (C. C. A. 6, 1939), 104 F. (2d) 749, c. d. 308 U. S. 592, 60 S. Ct. 121, 84 L. Ed. 495; *Gerald M. Friend, Inc. v. Walsh et al.* (C. C. A. 2, 1944), 141 F. (2d) 180, 182.

Hence, all that Respondent says concerning commercial success, commercial practicability and commercial use of the Bond invention is of no avail unless the statutory requisites of invention are present in the product itself, which we have shown herein are not.

XIII. FUNCTIONAL LANGUAGE IN THE CLAIMS IS IMPROPER WHEN OTHER LANGUAGE IS AVAILABLE.

The Respondent would complain that the patent claims are defined in the only language available to the art. (Br. 63 to 71.) However, the Respondent was able in its brief to point out factors that should be interpreted into the claims for purposes of limitation to give the Bond invention novelty, utility and inventiveness. We do not find that these limitations are in the claims. It is clear, therefore, that the Respondent could have more clearly and more accurately described the product as he did in his brief. However, the Respondent preferred not to limit his claims to the factors that he now says are so essential to novelty and utility, and insisted upon and obtained the broad claims of the patent.

It is therefore clear that the physiological characteristics of the bacteria are not the only terms available to the patentee in describing what he now claims as his invention. Since there are other ways, as he has shown in his brief, by which the invention could have been claimed, he cannot now be heard to complain because the functional language that he used at the exact point of novelty in the claims falls within the condemnation of the decisions of this Court. *Halliburton Oil Well Cementing Co. v. Walker et al.*, 329 U. S. 1, 67 S. Ct. 6, 91 L. Ed. 15 to which we have called attention in our brief, pages 38 and 39. The mere fact that the patentee could not at that time find language suitable to describe what he now claims as his invention, when he has shown in this brief that such language was available, is no excuse for his failing to define definitely and conclusively what are his invention and claims. *General Electric Co. v. Wabash Appliance Corp. et al.*, 304 U. S. 364, 372, 373, 58 S. Ct. 899, 82 L. Ed. 1402; *White v. Dunbar*, 119 U. S. 47, 51-52, 7 S. Ct. 72, 30 L. Ed. 303; *In re Ewald* (C. C. P. A., 1941), 117 F. (2d) 755, 757; *In re Hegan* (C. C. P. A., 1938), 97 F. (2d) 86, 88.

XIV. RESPONDENT'S STATEMENT OF PETITIONER'S POSITION IS INCORRECT.

The statement on page 31 of Respondent's Brief is in error as to Petitioner's position. Our position has been stated in Petitioner's Brief, page 15, and restated in this reply, page 2. While it is true, that we have previously urged the point that the theory of the Bond patent is false, and that inhibitive strains do not exist generally, we have assumed for the purpose of argument in this Court that Bond is correct in his finding of inhibition and non-inhibition among the *strains of bacteria.*

Likewise, without conceding that there is no anticipation by prior art, as stated in footnote 4, Petitioner's Brief, page 4, we have, for the purpose of argument, waived the question as to whether or not the function is there. With the position the Petitioner has taken for purposes of argument before this Court, it makes no difference what the theory is concerning the Bond patent or what mixed inoculants did or did not do, for Bond merely discovered a law of nature and without more, used it and thus does not have an "invention."

XV. SPECIFIC ANSWERS TO RESPONDENT'S BRIEF.

1.

On page 36 of Respondent's Brief he states that the principle was established by *LeRoy et al. v. Tatham et al.*, 14 How. (55 U. S.) 156, 14 L. Ed. 367, to the effect "that application of a principle or law of nature in a useful article of commerce is patentable," but that is not true. *LeRoy v. Tatham*, after announcing the rule that "a principle * * * cannot be patented * * *" went on to say that "a patent will be good * * * if that principle is by the specification applied to any special purpose, so as thereby to effectuate a practical result and benefit not previously attained." This was not said without due regard to the statute which requires that an invention be an "invention" or a "discovery" and be "new" and "useful," for in this

case a new wrought pipe had been made as distinguished from a cast pipe. Thus, the case of *LeRoy et al. v. Tatham et al.* did not overlook the newness required by the statute, as the Respondent would indicate by his statements.

2.

On pages 37, 38, 39 and 40 the Respondent refers to the decisions of this Court, and other Courts, and from them draws the inference that a patent will be good if a new property is discovered in matter and this is practically applied to obtain a beneficial result, it being the application of the law of natural science or rule which constitutes the peculiar feature of the invention.

Without more, this is not true, for it would avoid the statute which requires "invention," "discovery" and that the device created be "new" and "useful."

All of the cases referred to by the Respondent come back to the one proposition, that you must have a "new" and "useful" structure before you can have a patentable invention.

In *LeRoy et al. v. Tatham et al.*, 14 How. (55 U. S.) 156, 14 L. Ed. 367, there was a "new" kind of pipe created, it being "wrought" instead of "cast." In *Wintermute v. Redington* (C. C. Ohio, 1856), Fed. Case 17,896, 1 Fish Pat. Cas. 239, 30 Fed. Cas. 367, the claim was to a new mechanical arrangement of elements which utilized natural principles. However, the apparatus was "new." In *Sewall v. Jones*, 91 U. S. 171, 23 L. Ed. 275, the patent claim was to a method of preserving corn which included removing the kernels from the cob, placing the kernels in cans, sealing them, and exposing them to heat. Natural principles were involved, but the patent was on the specific process. However, the patent was declared invalid for want of novelty. In *Cameron Septic Tank Co. v. Village of Saratoga Springs* (C. C. A. 2), 159 Fed. 453, c. d. 209 U. S. 548, 28 S. Ct. 759, 52 L. Ed. 921, the patent covered the process steps which had not

previously been used in the particular form and order and the process therefore was "new."

This is all summed up in this Court's decision in *Mackay Radio & Telegraph Co. v. Radio Corporation of America,* 306 U. S. 86, 94, 59 S. Ct. 427, 83 L. Ed. 506 wherein it is stated: "* * * a novel and useful structure created with the aid of knowledge of scientific truth may be [patentable]." *The quality of newness is therefore essential in the decisions and in the statute, and this the Bond product does not have.*

The difference here is that the law of nature is God's property to be used by all people. The creation of something new in a physical sense when applying that law is man's creation. That is the subject of invention. The difficulty with the Respondent's position is that the Bond product does not meet the test of being a "new" physical substance.

3.

On page 48 of its brief Respondent alleges that the Petitioner takes the position that Bond must make some change in the law of nature before he has a patentable invention. The fallacy of the Respondent's position is that the Respondent and the Petitioner know that laws of nature are unchangeable. The truth is, the Petitioner's position is that Bond must do more than merely use laws of nature without more, before he has an invention, and he must effect some result that is new even though he uses the laws of nature. All the cases so hold. It is the new physical structure that is patentable—not the law of nature.

4.

On page 54 of Respondent's Brief, he says that all that was claimed by Coolidge in the case of *General Electric Co. v. DeForest Radio* (C. C. A. 3), 28 F. (2d) 641, c. d. 278 U. S. 656, 49 S. Ct. 180, 73 L. Ed. 565, is pure tungsten, that is, a

product of nature *per se*. This is true as far as it goes, but the Respondent does not go far enough for the Coolidge patent also contained Claim 24 which reads as follows:

"24. A wire formed of ductile tungsten."

This claim was held invalid by the Court and the language of the Court in that case, from the second column, page 643 through the first column on page 644, is on all fours with the issue here if the Court will substitute "mixed inoculant" for the use of the word "wire" in the case, and "bacteria" for "tungsten."

What does Bond have? He has a mixed inoculant formed of non-inhibitive bacteria. Thus, Bond claims a product of nature in exactly the same way that Coolidge was claiming his product of nature and seeks to pass off his claim as being a "corporal embodiment capable of practical use and which does not exist in nature." So was Coolidge's wire "a corporal embodiment capable of practical use which did not exist in nature" but this did not save his claim from being invalid. *So, here, this should not save Bond's claim from being invalid.*

5.

On page 56, the Respondent states what he considers to be the Bond invention. He says that it is (a) a combination of selected bacterial strains (b) placed together in a specified condition, i.e., (c) in large numbers, (d) in a powder base of low nutrient.

But let us look at the claims. No one of them makes any mention of "large numbers" of bacteria and only Claims 8 and 13 make even a casual mention of a base "of low nutrient," and even here this is in indefinite terms of "substantially negligible concentration of bacterial nutrients."

The Respondent has tried to show a composition of matter by now including in the claims factors that are not

actually in them. The broad terminology of the claims cannot now be saved by interpreting into them limitations that are not actually there. This is contrary to law. *Smith v. Hall*, 301 U. S. 216, 57 S. Ct. 711, 81 L. Ed. 1049.

XVI. PUBLIC IMPORTANCE.

The Respondent on page 71 of its brief would pass over the public importance of this case. But let us look for a moment at the result that can and will occur if this patent on elements of nature is sustained.

If this patent is sustained, no one can even follow the prior art practices of making mixed inoculants in exact accordance with the prior art methods.

That mixed inoculants are old is admitted by Respondent. The record is clear that prior to Bond, bacteria of different kinds have been mixed together in a common base. Before Bond no one cared whether inhibited or non-inhibited kinds of bacteria were placed in the mixed inoculant. Since both existed, both found their way into the mixed inoculants of the prior art, and this is admitted by Bond himself.

Now with the advent of the Bond patent, Bond says that he discovered non-inhibited bacteria and that he has a monopoly on any and every mixed inoculant in which there is "at least one" strain of non-inhibited bacteria.[1]

Needless to say, if the prior art practices of merely indiscriminately mixing bacteria together in a common base is followed, inhibited and non-inhibited bacteria will find their way into the inoculant. But now with the advent of the Bond patent, this, according to Bond, is barred. Thus, Bond is not only endeavoring to protect an alleged invention, but he is endeavoring to stop the practice of prior art methods.

---

[1] See Claim 5, R. 779.

As this Court stated in *Foley, Admx. of Gathmann v. United States*, 260 U. S. 667, 676-677, 43 S. Ct. 240, 67 L. Ed. 451:

> "If the asserted result was inevitable in the method of the patents, it was inevitable in the method in use prior to the patents."

Respectfully submitted,

H. A. TOULMIN, JR.,

Attorney for Petitioner.

H. A. TOULMIN, JR.,
D. C. STALEY,
Of Counsel.